

Renewable Energy Question # 7: How does Michigan's renewable requirement compare to other states/provinces/countries? How are other jurisdictions similar/dissimilar? What has been the experience in other jurisdictions in terms of compliance, costs, reliability, and environmental impact?

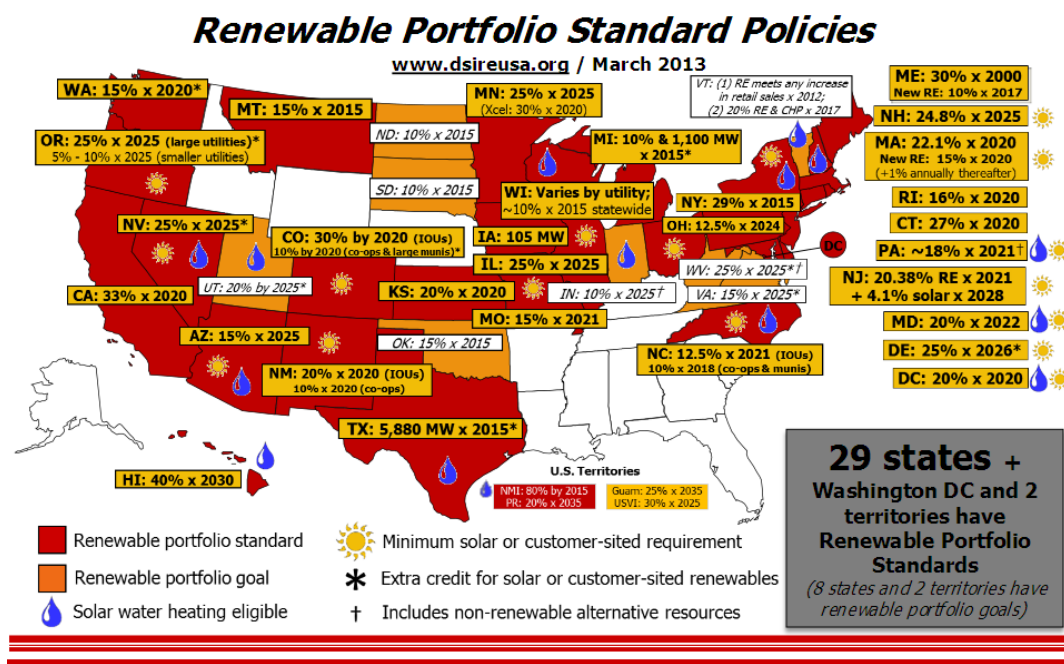
Though simple in their primary goal of supporting the deployment of new renewable energy resources, renewable electricity standards can be complex in design. For example, the Lawrence Berkeley National Laboratory has identified at least 15 different design elements that have been typically considered by states as they develop RES policies:

- Renewable energy targets and timeframes
- Electric service providers obligated to meet the standard, and use of exemptions
- Eligibility of different renewable energy technologies
- Qualification of existing renewable energy projects
- Treatment of out-of-state renewable energy projects
- Whether technology set-asides or other tiers are used
- Use of credit multipliers
- Allowance for renewable energy credits (RECs), and REC definitions
- Methods to enforce compliance
- Existence and design of cost caps
- Compliance flexibility and waivers
- Contract requirements
- Compliance filing and approval requirements
- Compliance cost recovery
- Role of state funding mechanisms

Due to the fact that any of these policy provisions can be designed in different ways in order to meet local economic, environmental, and political considerations, no two states have designed their RES policies exactly the same. The North Carolina Solar Center's Database of State Incentives for Renewables and Efficiency (<http://www.dsireusa.org>) is an excellent and dependable resource for comparing policy design elements between the states.

In terms of renewable energy targets and timeframes, Michigan ranks either in the middle of, or near the bottom of the list, when compared with other state RES policies. As a percent of total electric consumption, Michigan's 10 percent RES is lower than all but three of the 29 states and the District of Columbia that have an RES. Seventeen states and the District of Columbia have established renewable energy requirements of at least 20 percent. Likewise, Michigan's policy end date of 2015 is shorter than all but four other states. However, in terms of total renewable energy generation supported, Michigan ranks more in the middle of the pack, 16th among the 29 states and the District of Columbia. This is primarily because Michigan has a larger electricity demand than other smaller states that have implemented higher renewable energy targets.

Renewable electricity standards have also been implemented internationally, most with renewable energy targets greater than Michigan's requirement. For example, China has an RES that requires 15 percent renewable energy by 2015. The European Union as a whole also has a 33 percent by 2020 RES.

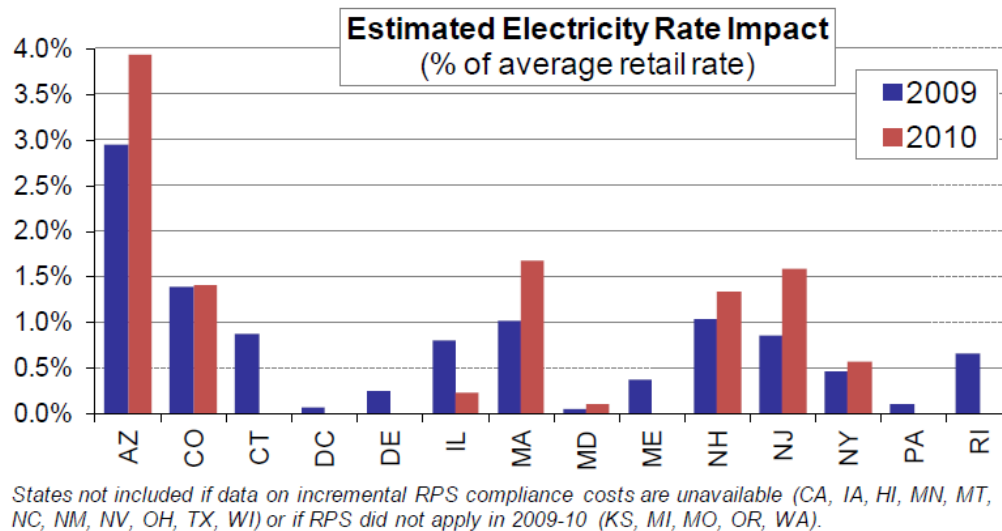


Source: North Carolina Solar Center's Database of State Incentives for Renewables and Efficiency

In terms of cost recovery, Michigan's RES includes a provision for a monthly customer surcharge. Obligated utilities are authorized to include an itemized monthly charge for the costs of compliance with renewable and energy efficiency requirements. This approach is different from most other states, where the typical policy is to allow for recovery of prudently incurred costs after the compliance investments have been made.

Compliance and Cost Experiences: Like most other states, Michigan is on track to meet its 10 percent by 2015 RES. According to data from the Lawrence Berkeley National Laboratory, states monitoring compliance through 2010 reported that utilities had met about 96 percent of their renewable energy requirements. Fifteen of the 29 states with RES policies were in full compliance with their RES requirements, including several states such as Colorado, Iowa, Texas, and Minnesota, that are several years ahead of schedule. Twenty of the 29 states had achieved over 90 percent compliance, and most of the remaining states did not have an annual requirement in 2010.

Nearly all state RES policies include cost-containment measures to protect consumers from higher than expected costs. Nevertheless, meeting RES requirements is proving to be an affordable. The Lawrence Berkeley National Laboratory, having recently evaluated 2009 and 2010 RES compliance-cost data that were available for 14 states, estimated that all but one state experienced cost impacts of about 1.6 percent or less (see chart). In some states, like Arizona, the initial rate impact has been higher. However, these rate increases account for the upfront costs associated with building distributed renewable energy systems.



And there is further compelling evidence—found in more recent data reported by utilities and state agencies charged with RES implementation—that demonstrates the inherent cost-effectiveness of RES policies.

Consider the following examples:

- In Minnesota, renewable energy investments lowered electricity prices for Xcel Energy customers—the state’s largest utility—by 0.7 percent in 2008 to 2009. Xcel also estimated that meeting the RES through 2025 would increase costs by just 1.4 percent.
- In Oregon, renewable energy investments spurred by the RES in 2011 lowered total annual costs for PacifiCorp by \$6.6 million, and increased total costs for Portland General Electric by just \$630,000 (or 0.04 percent).
- In Illinois, the state’s two largest utilities, serving the majority of demand in the state, estimated RES compliance costs at 0.04 to 0.08 percent of average retail rates in 2012.
- In North Carolina, Duke Energy’s residential customers paid just 21 cents per month in 2012 to support the state’s RES (down from 27 cents in 2010), while Progress Energy’s residential customers now pay 41 cents per month (down from 55 cents in 2011).
- In Kansas, RES-driven development by the state’s two largest utilities in 2012 and 2013, which will put them more than halfway toward meeting their 20 percent by 2020 target, is resulting in a modest 1.7 percent rate increase for energy consumers.
- In Wisconsin, the PSC estimated that supplying 7.4 percent of the state’s total electricity demand from renewable energy resulted in a 1 percent rate increase from 2008 to 2010.

Resources:

1) Barbose, Galen. 2012. RPS Compliance Summary Data. Lawrence Berkeley National Laboratory. Available at: http://dsireusa.org/rpsdata/LBNL_compliance_dataAugust2012.xlsx